

To the Claims

Please amend claims 1, 15, 19, and 20 and cancel claim 2.

1. (Currently Amended) A method of managing a hierarchical storage management (HSM) environment, the environment including at least one HSM server and at least one file server having stored a managed file system, wherein the at least one HSM server and the at least one file server are interconnected via a network and wherein digital data files are migrated temporarily from the at least one file server to the at least one HSM server, the method comprising:

providing at least one list for identifying candidate data files to be migrated;

prespecifying a scanning scope determined by a number of candidate data files;

scanning the managed file system until ~~the scanning scope is reached~~having reached the prespecified number of migration candidate data files;

selecting migration candidate data files according to at least one attribute;

recording the selected migration candidate data files in the provided at least one list for identifying candidate data files; and

migrating at least part of the selected candidate data files identified in the at least one list for identifying candidate data files from the file server to the HSM server.

2. (Canceled)

3. (Original) The method according to claim 1, wherein the scanning scope is determined by

the total amount of data for the candidate data files and wherein the managed file system is scanned until having the prespecified amount of data.

4. (Original) The method according to claim 1, wherein the scanning of the managed file system is resumed at a location of the managed file system where a previous scanning is left off, and continued accordingly.

5. (Original) The method according to claim 1, wherein replacing a migrated data file in the managed file system by a stub file providing at least information about the location of the migrated data file on the HSM server.

6. (Original) The method according to claim 1, further comprising monitoring a current state of the managed file system and initiating automigration dependent on the monitored current state of the managed file system.

7. (Original) The method according to claim 6, comprising the further steps of automigrating candidate data files with respect to the list for identifying candidate data files and assigning a unique identifier to each of the migrated candidate data files.

8. (Original) The method according to claim 7, wherein the unique identifier is specific to the underlying file system allowing direct access to a migrated data file.

9. (Original) The method according to any of claim 6, wherein providing two lists for identifying candidate data files, whereby the first list is generated and/or updated by a scanning process and whereby the second list is used by a automigration process, and whereby the automigration process gathers the first list from the scanning process when all candidate data files of the second list are migrated.
10. (Original) The method according to any of claim 9, wherein the automigration process is performed by a master/slave concept where the master controls the automigration process and selects at least one slave to migrate candidate data files provided by the master.
11. (Original) The method according to claim 1, comprising the additional steps of ranking and sorting the candidate data files contained in the at least one list for identifying candidate data files, in particular with respect to the a file size and/or time stamp of the data files contained in the at least one list for identifying candidate data files.
12. (Original) The method according to claim 1, wherein the scanning of the managed file system is initiated dependent on expiration of a prespecified wait interval or initiated by the automigration process.
13. (Original) A method of reconciling a managed file system migrated from a file server to

an hierarchical storage management (HSM) server via a network in accordance with the method according to any of claims 7 to 12, with a current state of the managed file system on the file server, wherein data files migrated to the HSM server are recorded in a list of migrated data files having a unique identifier for each of the migrated data files, the method comprising the steps of: querying the list of migrated data files migrated from the managed file server to the HSM server; for each file entry in the list of migrated data files, retrieving from the managed file system at least one attribute of the migrated data file that is identified by the corresponding unique identifier; comparing the retrieved attributes with the corresponding attributes stored in the list of migrated data files; and updating the HSM server for the migrated managed file system dependent on the results of the preceding step of comparing.

14. (Original) The method according to claim 13, wherein performing the steps of claim 13 by a reconciling process and wherein the reconciling process requests the list of migrated data files via the network from the HSM server.

15. (Currently Amended) A hierarchical storage management (HSM) system including at least one HSM server and at least one file server having stored a managed file system, the at least one HSM server and the at least one file server being interconnected via a network, where data files are migrated temporarily from the at least one file server to the at least one HSM, the system

comprising:

means for prespecifying a scanning scope determined by a number of candidate data files

~~a first~~ means for scanning the file system until having reached the prespecified number of migration candidate files and for identifying candidate data files to be migrated;

~~a second~~ means for monitoring the managed file system;

~~a third~~ means for migrating candidate data files to the HSM server;

~~a fourth~~ means for reconciling the managed file system.

16. (Original) The system according to claim 15, further comprising a means for replacing a migrated data file in the managed file system by a stub file providing at least information about the location of the migrated data file on the HSM server.

17. (Original) The system according to claim 15, further comprising means for assigning a unique identifier to at least part of the candidate data files stored in the storage means.

18. (Original) The system according to claim 15, further comprising at least two storage means for identifying candidate data files, where the first storage means is generated and/or updated by a scanning process and where the at least second storage means is used by an automigration process, and where the automigration process gathers the content of the first storage means from the scanning process when all candidate data files of the at least second storage means are migrated.

19. (Currently Amended) A data processing program for execution in a data processing system comprising software code portions for performing a method comprising:
providing at least one list for identifying candidate data files to be migrated;
prespecifying a scanning scope determined by the number of candidate data files;
scanning the managed file system until ~~the scanning scope is reached~~having reached the
prespecified number of migration candidate data files;
selecting migration candidate data files according to at least one attribute;
recording the selected migration candidate data files in the provided at least one list for identifying candidate data files; and
migrating at least part of the selected candidate data files identified in the at least one list for identifying candidate data files from the file server to the HSM server.

20. (Currently Amended) An article of manufacture comprising a program storage medium readable by a processor and embodying one or more instructions executable by the processor to perform a method comprising:
providing at least one list for identifying candidate data files to be migrated;
prespecifying a scanning scope determined by a number of candidate data files;
scanning the managed file system until ~~the scanning scope is reached~~having reached the
prespecified number of migration candidate data files;
selecting migration candidate data files according to at least one attribute;

recording the selected migration candidate data files in the provided at least one list for
identifying candidate data files; and
migrating at least part of the selected candidate data files identified in the at least one list for
identifying candidate data files from the file server to the HSM server.